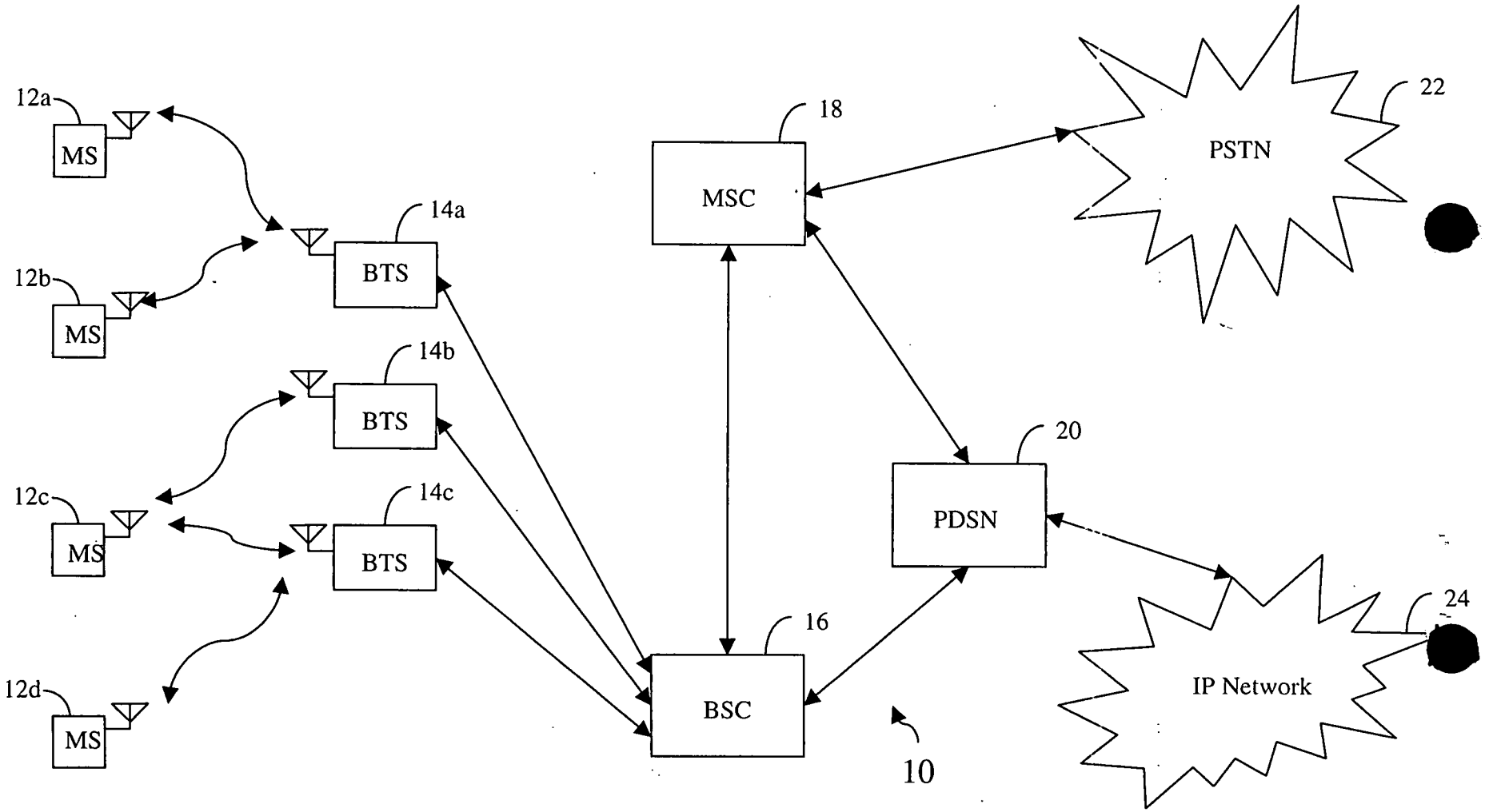
12a
MS
12b
MS
12c
MS
12d
MS
14a
BTS
14b
BTS
14c
BTS
18
MSC
22
PSTN
20
PDSN
16
BSC
24
IP Network
10

FIG. 1

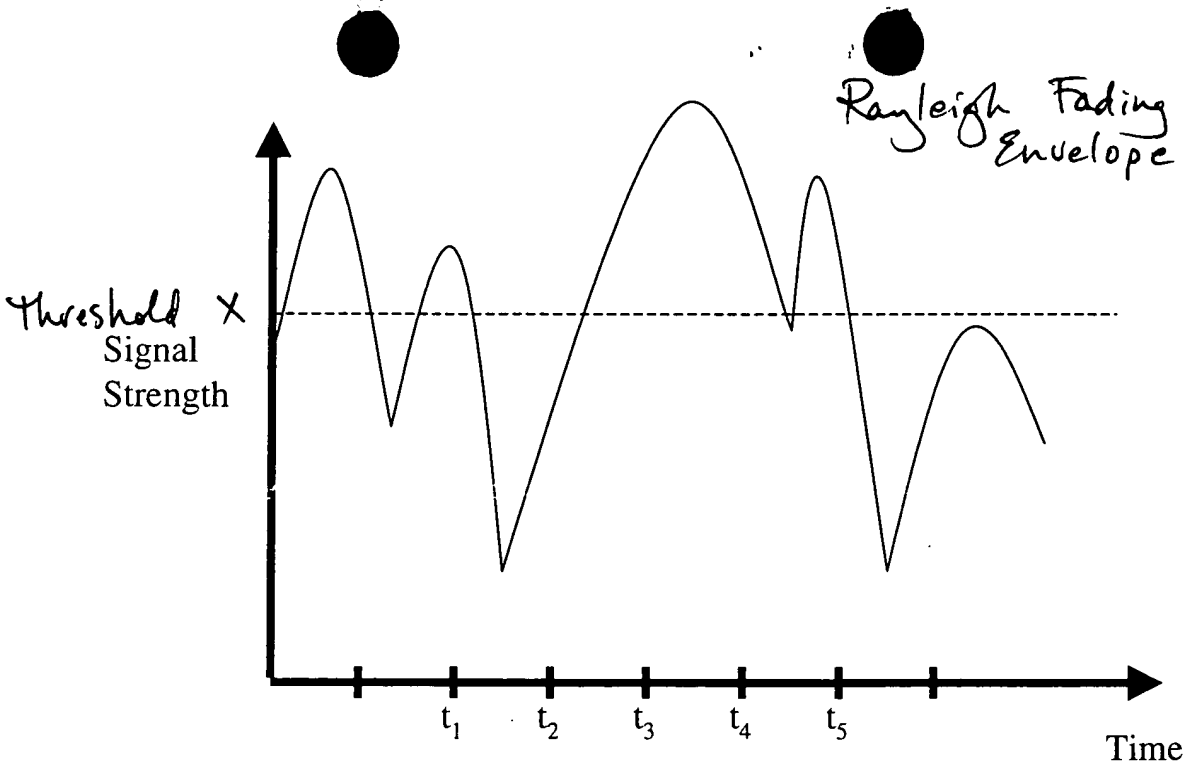
Rayleigh Fading Envelope
Threshold X
Signal Strength
t_1
t_2
t_3
t_4
t_5
Time

FIG. 2

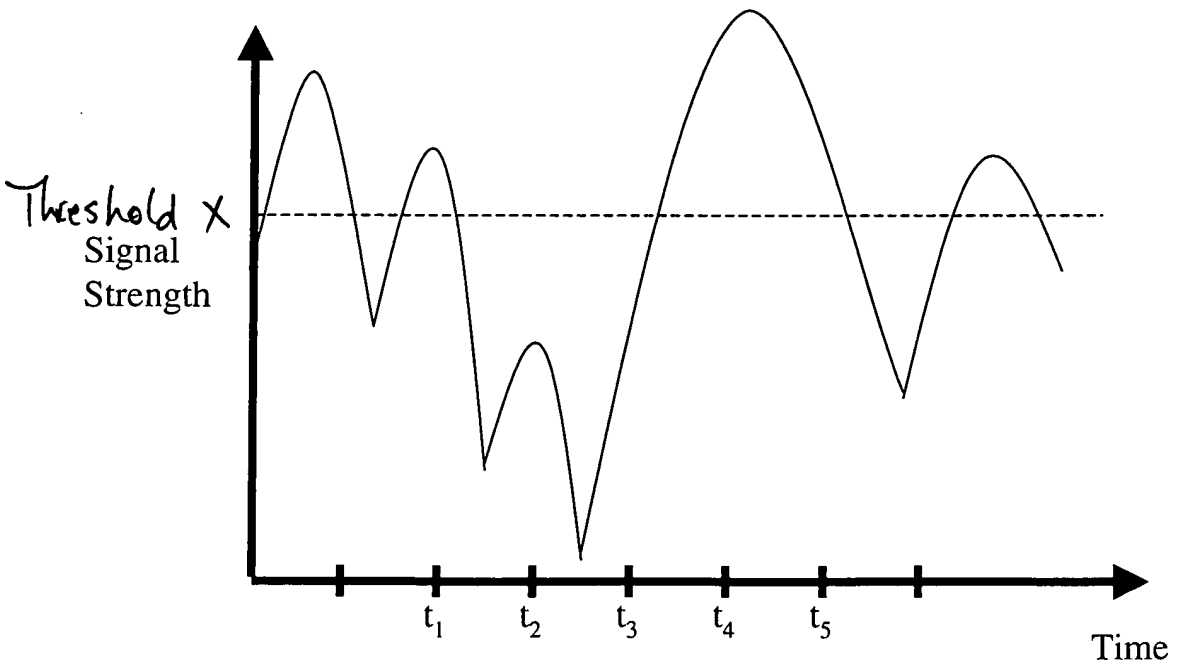
Threshold X
Signal Strength
t_1
t_2
t_3
t_4
t_5
Time

FIG. 3

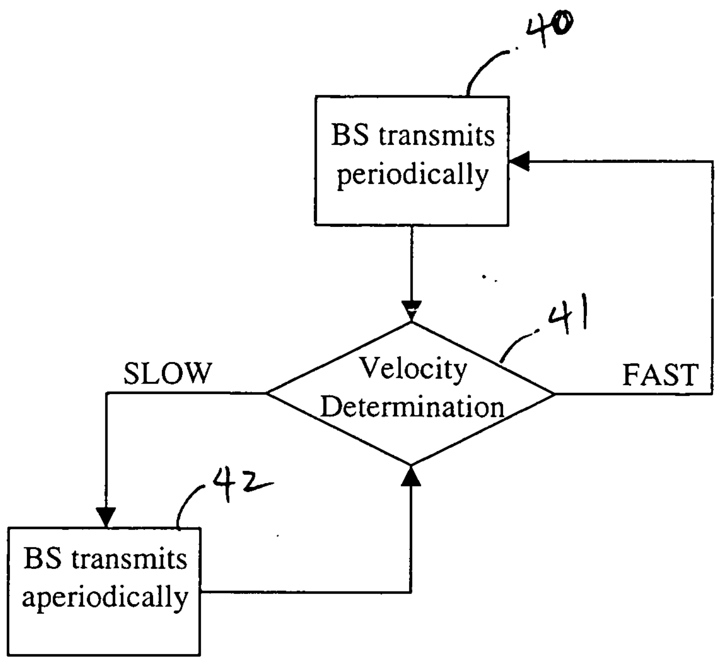

FIG. 4

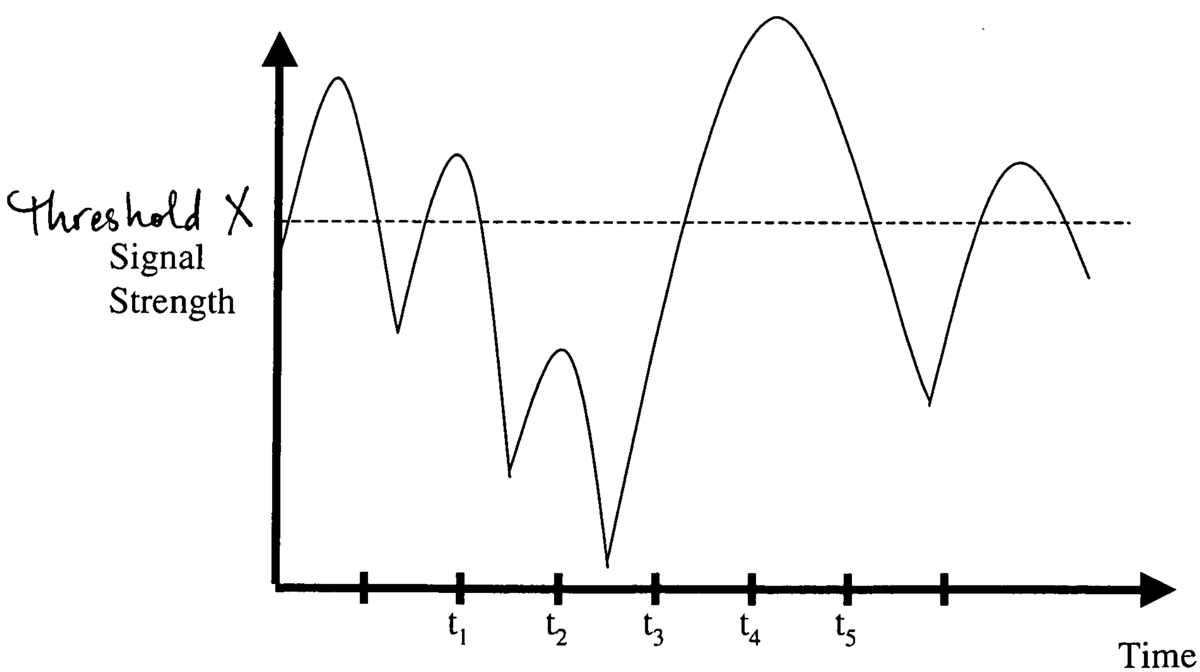

FIG. 5

3 kph, 10 users, -5 dB

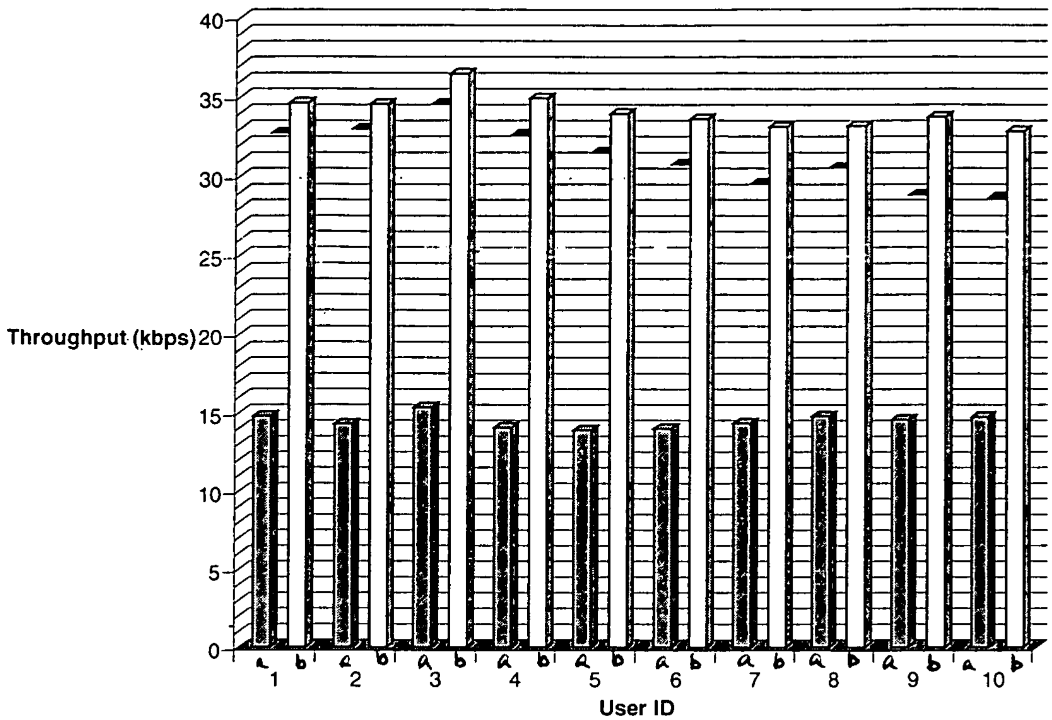

FIG. 6

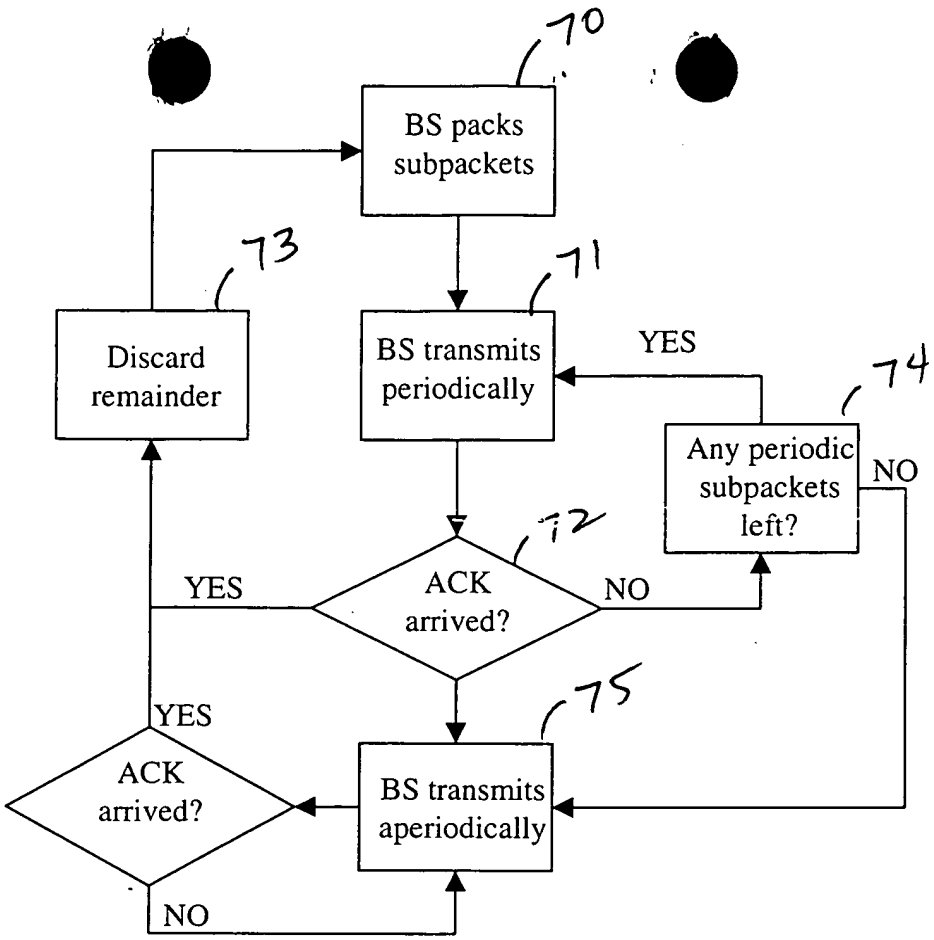
70
BS packs subpackets
73
Discard remainder
71
BS transmits periodically
YES
74
Any periodic subpackets left?
NO
72
YES
ACK arrived?
NO
YES
75
ACK arrived?
BS transmits aperiodically
NO

FIG. 7

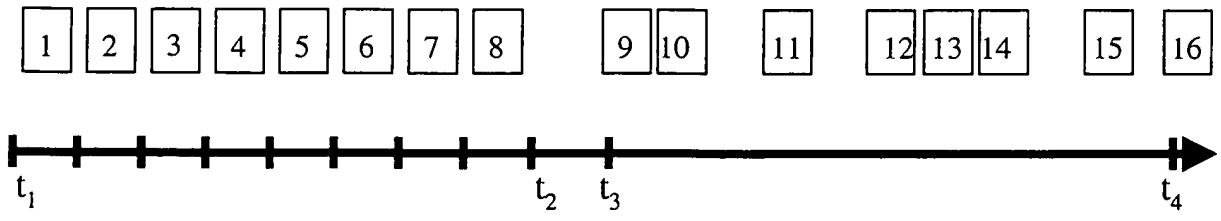
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
t_1
t_2
t_3
t_4

FIG. 8

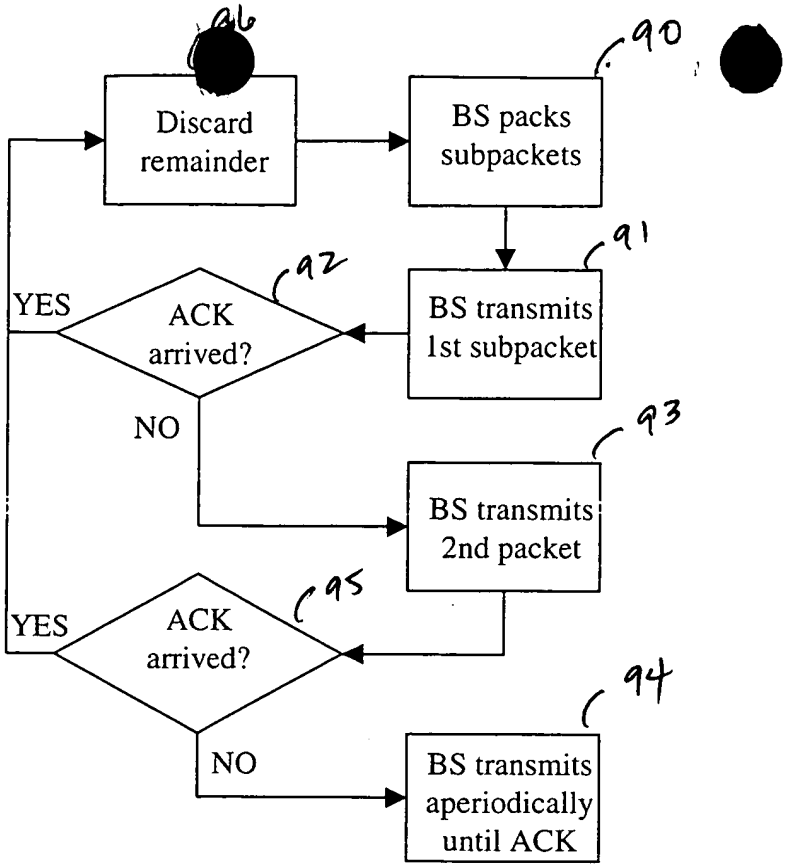
96
90
Discard remainder
BS packs subpackets
91
92
YES
ACK arrived?
BS transmits 1st subpacket
NO
93
BS transmits 2nd packet
95
YES
ACK arrived?
94
NO
BS transmits aperiodically until ACK

FIG. 9

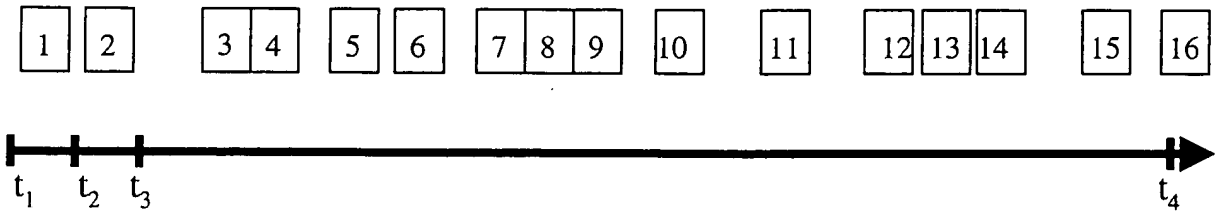
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
t_1
t_2
t_3
t_4

FIG. 10

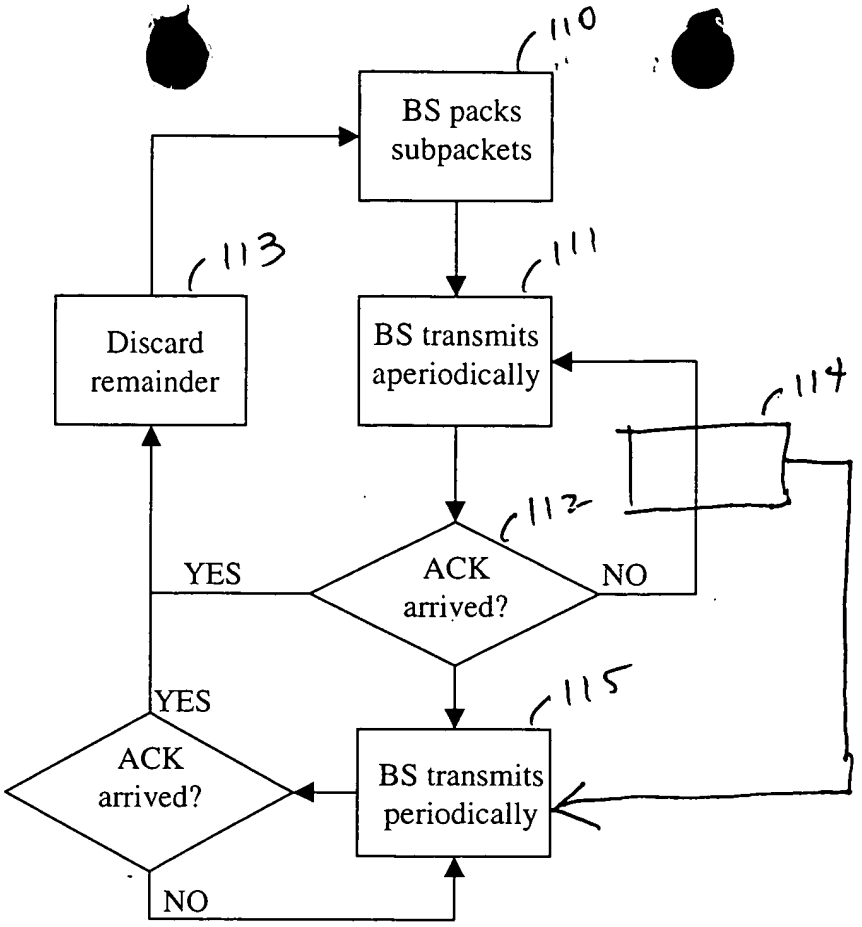
110
BS packs subpackets
111
BS transmits aperiodically
112
ACK arrived?
YES
NO
113
Discard remainder
114
115
BS transmits periodically
ACK arrived?
YES
NO

FIG. 11

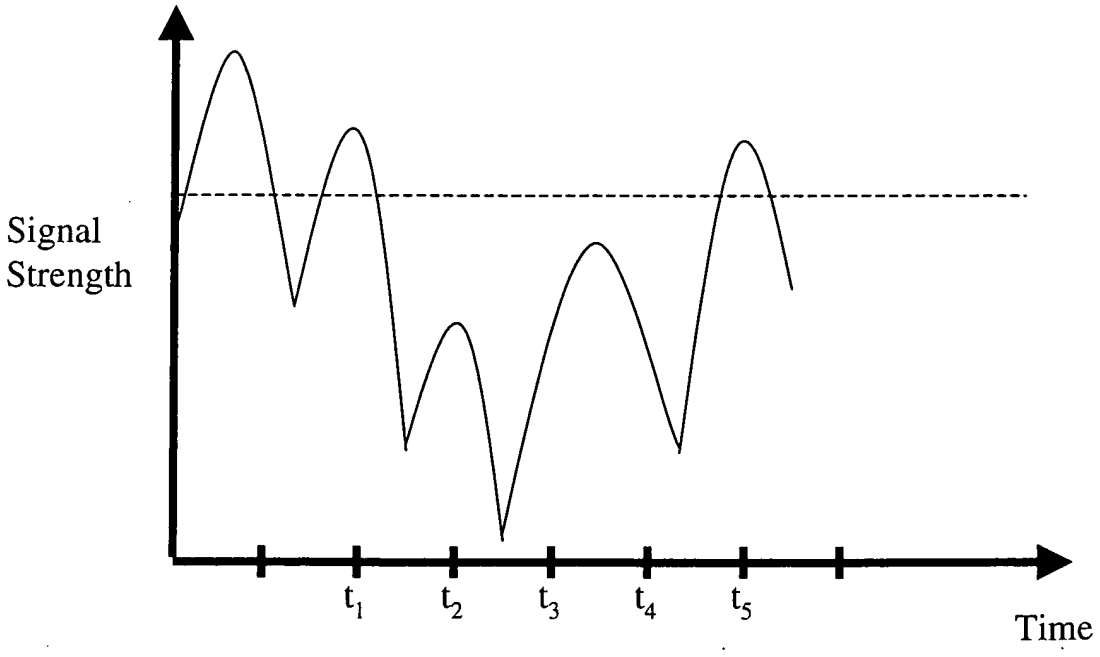
Signal Strength
t_1
t_2
t_3
t_4
t_5
Time

FIG. 12

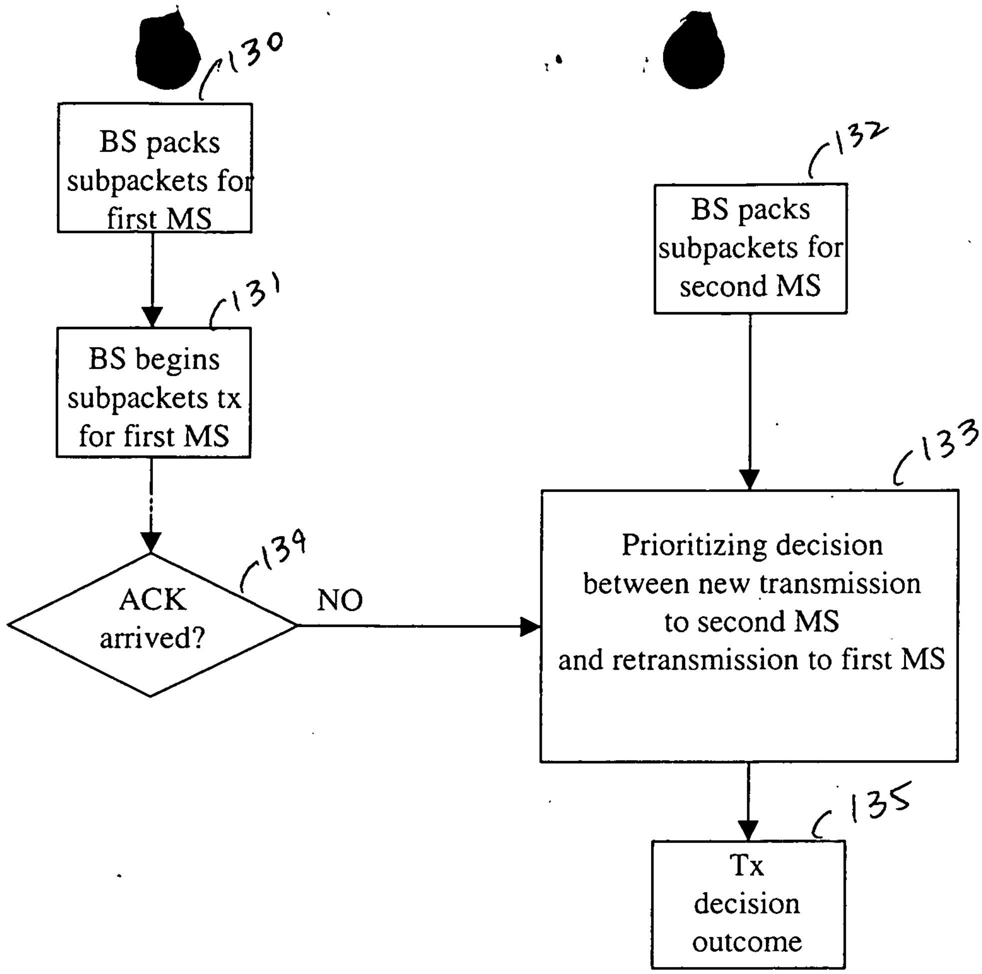
130
BS packs subpackets for first MS
131
BS begins subpackets tx for first MS
139
ACK arrived?
NO
132
BS packs subpackets for second MS
133
Prioritizing decision between new transmission to second MS and retransmission to first MS
135
Tx decision outcome

FIG. 13